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ABSTRACT

A pair of 9-year-old boys with socioemotional and interpersonal difficulties was observed unobtrusively in 35 weekly hour-long therapy sessions over the course of 2 school years. A transcript/narrative analysis technique was used to identify all interpersonal negotiation strategies each child used within each session. Strategies were classified according to a coding system that simultaneously ordered them according to four developmental levels (0, impulsive-physicalistic; 1, unilateral-coercive; 2, reciprocal-influential; and 3, collaborative-mutual) and two interpersonal orientations (self- and other-transforming). With individual strategies as the basic unit of analysis, strategies in each weekly session were charted according to level and orientation, and summed to show total distributions and trends over time. Results indicated that the predominant level of strategy used by both children was unilateral (level 1) followed for each child by reciprocal (level 2), impulsive (level 0), and collaborative (level 3) strategies. Across time, a trend toward increased use of reciprocal strategies was suggested, although there was wide oscillation in the percentage and absolute use of strategies coded at each level from one weekly session to the next. Different patterns of strategy use were identified for each child. Results were discussed with respect to their implications for using developmental methods and models for clinical purposes. (Author/RH)

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Observing Troubled Children's Interpersonal Negotiation Strategies: Implications of and for a Developmental Model[1]

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Running Head - Troubled Children's Strategies

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Abstract

Two nine-year old boys, both selected from a pool of children with socio-emotional and interpersonal difficulties, were observed unobtrusively in 35 weekly hour-long Pairs Therapy sessions over the course of two school years. A transcript/narrative analysis technique was used to identify all interpersonal negotiation strategies each child used within each session. Strategies were classified using a coding system which simultaneously ordered them according to four developmental levels (0, impulsive-physicalistic; 1, unilateral-coercive; 2, reciprocal-influential; and 3, collaborative-mutual) and two interpersonal orientations (Self- and Other-transforming). Using individual strategies as the basic unit of analysis, strategies in each weekly session were charted according to level and orientation, and summed to show total distributions and trends over time. Results indicated that the predominant level of strategy used by both children was unilateral (level 1) followed for each child by reciprocal (level 2), impulsive (level 0), and then collaborative (level 3) strategies. Across time a trend toward increased use of reciprocal strategies was suggested, although there was wide oscillation in the percentage and absolute use of strategies coded at each level from one weekly session to the next.

Different patterns of strategy use were identified for each child. With respect to the pattern of use of orientations (Self- and Other-transforming) over time, each subject began the interaction with strategies rigidly adhering to one particular orientation. However, while one subject was consistently rigid in orientation over the 35 weeks, the other demonstrated a movement with time to a more balanced usage of strategies across orientations. Results of this study were discussed with respect to their implications for using developmental methods and models for clinical purposes.

Observing Troubled Children's Interpersonal Negotiation Strategies: Implications of and for a Developmental Model

INTRODUCTION

In recent years a large body of literature has addressed itself to the influence of children's social competence on their establishment and maintenance of peer relationships. In particular, concern has focused on the social skill deficits of children who have few, if any,friends. Gottman, Gonso, and Rasmussen (1975) found unpopular children to be less skillful than popular children in role plays of hypothetical situations involving making friends. Renshaw and Asher (1982) found that inappropriately negative strategies were offered exclusively by unpopular (as opposed to popular) children in hypothetical situations of making and maintaining friendships and dealing with conflicts. Unpopular children also offered more aggressive solutions in conflict situations, and in situations of making and maintaining friendships they supplied more strategies that were vague or that appealed to authority.

Research looking at actual behavioral correlates, as opposed to responses to hypothetical situations, has shown children of low social status to be more aggressive than high status children (McGuire 1973; Moore 1967) and to be less likely to adopt the frame of reference of peers (Putallaz and Gottman, 1981). Children rejected by their peers were found to display more negative behaviors in peer interaction, such as physical aggression, verbal aversiveness, and possessiveness (Dodge, Coie, and Brakke, 1982; Hartup, Glazer, and Charlesworth; 1967).

Research clearly indicates that children with friendship difficulties display strategies in peer interaction which are problematic at best. Yet at least two issues are left unresolved. One is the question of whether, and the extent to which, these behavior problems represent difficulties with performance or with competence:

of conduct or of understanding. The difficulties that these children have in playing roles and adopting the frame of reference of others suggests that social-cognitive competence deficits may be operating to limit behavioral effectiveness. However, problematic behavioral strategies may result from either, or both, a lack of social-cognitive competence, or from an inability to effectively put this competence to use in action. The second issue involves whether the different types of behaviors used by unpopular and popular children are developmentally related. Can the identified problematic social strategies of isolated or troubled children by usefully conceptualized as developmentally less advanced than the more effective strategies? This paper presents a model to address these two issues.

Recent attempts by researchers to study social behavior in relation to developmental aspects of social-cognitive competence in naturalistic or quasi-naturalistic settings are promising. Levin and Rubin (1982) have demonstrated the way in which the growth of social understanding is related to preschooler's use of more sophisticated requestive strategies in a free-play context. Forbes, Katz, Paul, and Lubin (1982) have taken a differential look at the development of persuasive strategies and their relation to social-cognitive operations. Persuasive strategies were categorized, ordered developmentally by differentiation and integration, and shown to be related to factors such as age and social-cognitive development. Along similar lines Selman and his colleagues have studied structural developmental relations in the same children between interpersonal understanding levels revealed in an interview and interpersonal negotiation strategies in a real-life activity group. (Selman, Schorin, Stone, and Phelps, 1983). Children's repertoires of strategies were assigned developmental levels derived from use of levels in the coordination of social perspectives. The number of developmentally advanced behavioral strategies was significantly lower for children who were also at low levels of reflective

interpersonal understanding than for age cohorts whose understanding was more advanced.

However, this normative study has focused on the relation, through ontogenetic development, of social-cognitive competence and social behavior. Our concern in the present paper turns to the role of social-cognitive competence in behavior. In considering the development of understanding in conduct, the ontogenetic focus of the structural-developmental model used in studying competence is insufficient, for it assumes that once a particular level of development is attained it is not easy prey to regressive forces (Selman, 1981). The developmental study of interpersonal conduct must allow for regressive as well as progressive movement, and must account for the influence of external or internal factors of the moment on the level of conduct exhibited. For this study, the broader perspective of orthogenesis, as defined by Werner (1948; 1957), is most appropriate, in that it allows for the study of regression as well as progression while still integrating developmental aspects of reorganization (see also Block, 1982).

The orthogenetic approach to the developmental study of interpersonal conduct

As defined by Werner, orthogenesis refers to a generally regulative principle whereby development proceeds from a state of relative globality and lack of differentiation to a state of differentiation and hierarchic integration. Thus, the orthogenetic approach involves a developmental or hierarchical analysis of a number of different kinds of organismic processes that hold some potential telos or forward direction, processes of which ontogenesis, as defined above, is one case. However, the orthogenetic approach also allows for the study of pathogenesis, which refers either to comparison of the degree to which types of mental disorders are pathological across individuals or to progression or regression in the mental functioning of one individual over time; microgenesis, which involves the growth

of temporally rapid processes; and comparison of the mental lives of primitive and advanced species or cultures. Thus, unlike the structural-developmental ontogenetic approach, the orthogenetic model does not focus exclusively on development as a chronological sequential progression; relatedly, it allows for the concept of regression.

The aim of this paper is to sketch a preliminary developmental model of one aspect of interpersonal conduct, that of interpersonal negotiation strategies, and to test the value of this model in a clinical context. While the structural-developmental approach to ontogenesis is appropriate to the emergent construction of strategies for interpersonal negotiation, and to the levels in the coordination of social perspectives which frame the cognitive component of the heirarchical levels of negotiation strategies, the orthogenetic model is required for the developmental analysis of the individual's real-life conduct in interpersonal interactions, the use of negotiation strategies, once developed.

This developmental approach is applied to the study of psychopathology in order to address the two issues initially raised: to look at performance versus competence, and to examine the developmental nature of strategy types. It is likely that troubled children may evidence more of a gap between their social-cognitive competence and the understanding employed in conduct, and they may evidence more variability in their use in conduct of high-level understanding across contexts. This variability in level of conduct across contexts also would allow a view of the range of strategy types that may be examined for their developmental nature. Thus, the application of the developmental model to the study of psychopathology may afford us a clearer picture of normal as well as abnormal development (c.f. Cicchetti & Hesse, 1982).

A model of interpersonal negotiation strategies

Our developmental analysis of interpersonal negotiation strategies focuses on the ways an individual deals with others in contexts for negotiation. It is concerned with how the person coordinates in conduct the understanding of Other's thoughts, feelings, and motives in conjunction with his/her own in attempting to balance inner and interpersonal disequilibrium. Interpersonal negotiation strategies at each level are defined by four component factors operating in the conduct of the moment: the construal of Self and Other's perspective, the primary purpose, the affective control, and the action-orientation. The first three factors (Self-Other construal, primary purpose, and affective control) work together to determine a strategy's developmental level, whereas the fourth factor identifies a strategy's orientation (Self-transforming orientation or Other-transforming orientation). Figure 1 presents a graphic representation of this 4 developmental levels by 2 action orientations model.

Insert Figure 1 about here

The Self-Other construal component involves the operative understanding of Self and Other at the moment of interaction. Development in this component moves from the lowest level where Self and Other are construed as non-psychological objects, to increasing appreciation and valuation of the thoughts, feelings and wishes of both Self and Other at higher levels. The nature of this construal is determined not only by the Self's general construction of persons and relations but also by factors of the particular social context; thus it is distinct from the individual's social-cognitive competence. We may find in a reflective interview context that a child has the competence to recognize that Self and Other have distinct wants, yet s/he may implement this understanding in action (performance) at one moment by trying to persuade a peer to let him/her borrow a toy, or may not act with this understanding at another time and grab the toy without consideration of the

Other's wishes.

The primary purpose component of a strategy is the dominant conscious motivation underlying the behavior. At the lowest developmental level the strategy's purpose is the pursuit of immediate physical "goods". Moving to higher levels, the purpose begins to involve relational goals and to focus on the process as well as the outcome of social interaction. For example, the purpose of a low level strategy may be only to have a toy, while at a higher level the predominant purpose may be to change the Other's mind to agree with the Self's.

The affective control component considers the way the individual perceives and deals with his or her affective disequilibrium in an interpersonal context. At the lowest developmental level, affect is experienced as diffuse, all-encompassing, and externally caused, and feelings are impulsively "acted-out" with little control by the Self as an active agent. For example, a young child may impulsively flee when an adult or more powerfully perceived peer makes a request she dislikes. At higher levels of development, affective disequilibrium is perceived and controlled by the Self by actively putting various feeling states into the perspective of a larger cognitive affective matrix context, such as by controlling immediate feelings but walking away to gain time to calm down and reconsider.

The action-orientation component in the interaction refers to whom the individual acts upon in his/her attempt to meet the needs of Self and/or Other in returning the interaction to equilibrium. In the Other-transforming mode the individual tries to transform the thoughts, feelings, or action of the Other. For example, a child may push a peer away from a water fountain for a drink. In the Self-transforming mode s/he tries to transform his/her own thoughts, feelings, or actions. For example, the child may obediently step away from the fountain if another wants a drink. At higher developmental levels of interpersonal negotiations the individual's actions are more integrated between the two orientations. Therefore development in

interpersonal behavior incorporates movement from rigid, isolated distinctions in one or the other orientation to a differentiated and integrated interplay between orientations.

As shown in Figure 1, the model allows for a consideration of observed behavior along both developmental (levels) and personality (orientations) dimensions. The first three components, which determine a strategy's developmental level, play an important role in distinguishing strategies which on the surface appear similar yet which reflect different underlying structures (developmental levels). For example, consider a child who wants a toy that a peer is using; when the peer refuses to let her use it, the child exits the room saying "I'm leaving." This gross behavior and correspondent verbal statement can mean different things depending on the child's construal, purpose,and affective control. The strategy may represent a thoughtless, impulsive and frantic bolt from the room with the purpose of physically avoiding the disturbing interpersonal context (level 0). On the other hand, it may reflect a Self- and Other-conscious, controlled attempt to influence the peer to feel badly so she will let her use the toy (level 2).

The fourth component (orientation) identifies that strategies may appear quite different because of their different action-orientations, yet be structurally (developmentally) at the same level of organization. This is the case with the two strategies mentioned previously--pushing another away from a water fountain and stepping away oneself. Both are considered level 0 strategies if they are both undertaken without regard to Other's or Self's wishes (the construal component), with immediate physical intent (the primary purpose component), and with unreflective impulsivity (the affective control component).

This level by orientation model stresses that development occurs in two ways: both upward in terms of level and integratively in terms of orientation. That is,

strategies at the highest level involve an integrated use of both orientations. Whether lower level behavior is always in one orientation or the other is a question we partially examine in the empirical work to follow. In this way the orientation component may tap into a developmental as well as personality dimension.

It is important to stress that there is no theoretical (structural) requirement, nor an expectation, that a child use strategies of only one particular level or of one orientation. A child's strategies is considered to be subject to fluctuation in level and orientation based on internal or external influences of the moment and context. Thus while a child may be assigned a single level score for social-cognitive competence (e.g. a level of social-perspective coordination), it is an empirical question whether there is variability across interactional contexts in a child's level and/or orientation of interpersonal strategy use. A child may act in ways coded at level 2 when under calm situations but at level 0 when experiencing anxiety; a child may act in a Self-transforming manner with an older sibling but in an Other-transforming way with lower-status peers.

Table 1 provides a sampling of prototypes of observed strategies as categorized by developmental level and action-orientation. The strategies illustrate the underlying structure of each category but are by no means exhaustive of strategies codeable under each category. Referring back to the studies of interpersonal behavior among popular and unpopular children, this developmental model for categorizing strategies appears useful. Strategies found among unpopular children (impulsive aggressivity, possessiveness, verbal aversiveness, appeal to authority) appear to be codeable as level 0 and 1 strategies, while the reciprocal and cooperative strategies of popular children are classifiable as level 2 and 3 behaviors.

Insert Table 1 about here

It should be stressed that assigning kinds of strategies to levels or orien-

tations is a theoretical heuristic. The categories can stand reliably whether organized developmentally or not; they describe methods of negotiation and can be related to such validating criteria as age, degree of pathology, or social maturity. Assessing the observed strategy at any one level or orientation is an inferential process based on a particular developmental perspective and theory.

The four levels by two orientations model was derived through the integration of prior theoretical formulations (Selman, 1981), empirical work entailing the observation of the behavior of both normal and socially troubled children, and informal observation of a wide range of individuals involved in social interactions. The model sketched here is articulated in greater detail elsewhere including a description of each component at each level (Selman, Demorest, and Krupa, in press), and several normative studies have been undertaken to partially tests its validity as well as the reliability of methods for its operationalization (Selman, et. al., 1983: Abrahami, Selman and Stone, 1981).

The study reported here attempts to continue this validation process in a clinical context. It has two empirical goals: (1) to test further the validity and reliability of a method for assessing negotiation strategies using the four levels by two orientations model, and (2) to study issues of social development by observing the repertoire of strategies of children with already defined problems in interpersonal behavior, with a particular focus on fluctuations in their performance. The study is framed in the context of clinical-developmental action research (Lewin, 1964). That is, the intent is to test the usefulness of applying an operationalized developmental model as a descriptive device for analysis of interaction in a clinical context. We attempt to address basic questions of social development within the context of a naturalistic process of change, that of a clinical treatment called "Pair Therapy". Pair Therapy works to facilitate the

social development of children with observed social skill deficits. However, the present paper is not a study of the effectiveness of this treatment; rather it seeks to study basic developmental processes of peer social interaction as observed relatively naturalistically among socially disturbed children in a clinical context.

Still the work both of therapy and of theoretical and empirical study are valuably informed by one another. The therapeutic process stimulates and articulates thinking about aspects of social development and their method of and amenability to change; the theory and findings of empirical work suggest ways to guide therapeutic intervention. For this reason we will present a brief description of the Pair Therapy process before reporting the process and findings of empirical study, and we will later suggest the implications of the findings for the clinical treatment of troubled children.

METHOD

The clinical context for research: Pair Therapy

The clinical aim of Pair Therapy is to provide a therapeutic context in which two children, whose social relations have proved problematic and ineffective, can work to gain the skills, rationale, and inner capacity to relate with peers. The treatment is not limited to one circumscribed aspect of social development. The attempt is made to improve the child's ability to develop and use flexibly and effectively strategies for interpersonal negotiation from a repertoire of possible alternatives. To this extent the goal of therapy is directly related to the theoretical model of interpersonal negotiation strategies. Yet attention is also paid to improving skills in self-reflection and communication; in anticipating, planning, and problem-solving; in sharing and playing interactively

for an extended period of time; in trusting Self and Other enough to develop a sense of effectance and a willingness to be vulnerable.

The pool from which pairs are selected is composed of children aged 8 to 12 attending a day school for children with emotionally and interpersonally based learning problems. Children who attend this school present symptoms and problems of some diversity in both nosology and etiology. Common to the sample, however, are emotional and learning difficulties of sufficient severity to make these children unmanageable within conventional or even "resource room" classrooms in their public schools. They exhibit a wide range of pathological behavior, including personality disorders, affective disorders, developmental disturbances, psychosomatic symptomatology, conduct disorders, and learning disabilities. All of the children share a common difficulty with peer relations.

Two children are matched for a pair based both on theoretical criteria relating to the model of interpersonal negotiation strategies and on practical criteria. As a rule children are yoked whose repertoire of strategies extend across and focus on the same levels, while the predominant action-orientations used is usually the opposite. Relevant practical concerns involve the children's sex, sociocultural background, particular problems and interests, level of intellectual and language abilities, basic compatability, desire for involvement in Pair Therapy, and scheduling possibilities. The selection process is based on a pre-treatment school-based observation period of several weeks.

The therapist's role in Pairs Therapy is important, yet his or her goal is to minimize this importance so that the children can learn to relate autonomously. The therapist attempts to facilitate the children's interaction in ways that are developmentally functional, setting a context for negotiation in an atmosphere tone of warmth and possibilities but also of control and limits.

For research purposes it might be ideal to observe pairs of socially troubled

children in more "natural interaction", i.e. without the presence of an active adult agent such as the therapist. However, due to the pathological nature of these children's social interactions, this is neither practically nor ethically possible. The children observed in this study have shown an inability to interact independently with a peer without risk of the interaction regressing to potentially harmful points. Thus this study looks at the interaction of two children in Pair Therapy while acknowledging but bracketing the importance of the adult's presence.

Procedures

The present study reports an analysis of data obtained through the narrative observation of two boys' social interactions with one another in the context of Pair Therapy. The particular pair, here called Karl and Peter, met regularly, once weekly, for 50 hour-long sessions over two academic calendar years (1979-1981). These sessions were under the management of an adult "therapist-supervisor". The data included in this analysis are of observations made during the last 10 sessions (16-25) of the first year, and of all twenty-five sessions held during the second year. Although narratives were also recorded during the initial fifteen sessions of the first year, these sessions and their narratives were used to test the applicability to dyads of the observational methods previously developed for larger groups, to refine procedures, to train narrator-observers, and to ascertain reliability in identifying contexts for negotiation and interpersonal negotiation strategies. Therefore, these data are not included in the present analysis.

Subjects

The subjects for this study were two boys, Karl, age 9 years 10 months, and Peter, age 9 years 6 months, at the onset of the observations. Karl was referred to the treatment school from a local school system which reported him to be overly aggressive, impulsive, and difficult to contain in a public school setting. He was reported to have had many fights with peers and was seen by

teachers as friendless. His full scale intelligence quotient (WISC-R) at time of testing during the initial diagnostic period was 117. He showed no signs of neurological or organic impairment. His physical development was typical. His family situation was viewed as very unstable, with his father only sporadically residing at home.

Peter was referred for placement because of his extremely withdrawn and isolated behavior in school. He would cry easily, and was scapegoated by the other children. Often when under stress he would rely upon extreme withdrawal to fantasy preoccupation as a defense or coping mechanism. His full scale I.Q. (also WISC-R) was 121. Somewhat lacking in age-appropriate large motor skills, Peter's developmental history was moderately delayed. However, he had no diagnosed "hard" neurological or organic signs.

The context for observations

Pair Therapy is a regular part of the after-school program of the school, running from 2 to 4 p.m. The therapy takes place in a room five m wide x ten m long. The room is equipped with a table, chairs, books, a blackboard, a toy shelf with selected materials, and several large cushions. Along one of the short walls running from 2 m up to 3½ m up the wall and across its breadth is a one-way mirror from behind which the process of Pair Therapy is observed. Unobtrusive observation is routine for all pairs; children are shown the observation booth and the recording equipment inside. Four microphones distributed in the Pair Therapy room are connected to an audio mixer and then to earphones and a tape recorder. The tape recorder makes direct audio tapes of all interactions while observers monitor each interaction with the earphones.

Method of data collection

Our observational processes have gone through a sequence of phases. Initially we began by analyzing direct audio-tape recordings of the verbal aspects of inter-

personal communication during interaction (Selman, Lavin, & Brion-Meisels, 1982). However this method quickly demonstrated the limits of divorcing verbal discourse from corresponding cues for feelings and motives in behavior (e.g. physical urgency or facial expression) or in tone of voice. The interpersonal negotiation strategies model is based on the assumption that behaviors which appear similar on the surface may be structurally different with regard to underlying construal, affective control, and purpose. What was needed was a recording process which captured these differentiating elements. Thus we adopted the narrative method, where cues such as tone of voice or facial expression could be reported. This method relied upon the observers' knowledge of the role of each of the component factors in the evaluation of a strategy. Thus the narrators attended to construal, affective control and primary purpose as elements of the observed behavior, so that reported cues of the nature of these factors could later be used for coding.

A modified event sampling procedures was used. Two observers, each trained to identify contexts for negotiation and the negotiation strategies within them, worked collaboratively, to provide a narrative description for the entire one hour session, for all sessions. Each was equipped with earphones to hear the verbal interaction in the Pair Therapy room as well as with a tape recorder to narrate observations. Alternately each took primary responsibility as narrator, while the other acted as a back up, clarifying and elaborating the interaction. Interpersonal negotiations within negotiation contexts were described, with narratives elaborating the observers inferences about the affective tone, motoric manifestations, and non-verbal cues, as well as the direct verbal interaction between individuals in the pair. Following each session, ambiguous contexts for negotiation or strategies within contexts were discussed by the two observers and the Pair Therapist to gain a consensus.

Coding the data

Typed transcriptions of actual tape-recordings and observer-reported narratives were the primary source of data for the study. Following the collection of all data, the transcript/narratives for all sessions were independently read and coded by each observer, first to identify the context for negotiation between peers, then the strategies used by each child within the negotiation context. Each identified strategy was coded for the level into which the strategy fell (0-3) and the orientation of the strategy (Self-transforming or Other-transforming). This process was facilitated by reference to a manual describing prototypical strategies at each orientation and level, as well as the organizational structure of the components of a strategy (construal of Self-Other relationship, affective control, primary purpose, and action-orientation) in each category. While the action-orientation was coded separately, the other three component factors were not coded individually but rather were used together to determine the strategy's developmental level.

There are a number of reliability and validity issues relevant to the confidence with which we implement this method. In this study the same observers narrated all sessions. To what extent would separate trained observers be likely to narrate similar information? Earlier assessments of agreement between narrators, when assessed by the degree of agreement of strategy level identified within a narration, is .83 using Cohen's Kappa technique (Selman, et. al., 1983). A separate issue involves the inclusion of cues for affective control and purpose; for some this would seem to require a level of inference on the part of the narrator which is unacceptable. We feel strongly about a number of points in this regard. First, in order to know the nature of a negotiation strategy, we must have information about the quality of affect and purpose, going beyond objective content information. Second, people are daily involved in making inferences from cues about affect and

purpose in social interactions. So possible "measurement error" notwithstanding, this is an important technique. Comparing the blind coding of ten sessions by the two trained observers, the following reliabilities were obtained:

1. Percentage of agreement on identification of contexts for negotiation: 83%
2. Percentage agreement of identification of strategies within contexts: 91%
3. Percentage agreement on level of agreed-upon strategies: 96%
4. Percentage agreement on orientation of agreed-upon strategy: 98%

The data for analysis was formed by comparing any differences in the separate codings of the two observers to work out a consensus rating. Figure 2 depicts a data summary sheet for a typical session. The individual strategies are separated into particular contexts for negotiation.

Insert Figure 2 about here

Quantifying interactive data: analytic decisions

Given the nature of the data, a first analytic decision revolves around the question whether to organize the interpersonal negotiation strategies of each of the two children separately, or together as a unit. While respectful of the potential value of the dyadic approach, the analysis in this paper will be limited to the analysis of each child individually. The rationale for this approach is that we wish to be able to compare the individual patterns of the children before merging their interaction for analysis of dyadic patterns. A second analytic decision is to use each of the individual treatment sessions as a basic unit or marker for describing patterns as they are examined across time. Thus, we will summarize how strategies at each level are used within whole sessions rather than within specific contexts within sessions.

Given these two decisions and the ordinal-hierarchical nature of the coding scheme, it is necessary to look separately at patterns of strategies for each level, rather than computing the mean strategy level score for each session. For

example, a session in which a child uses three level 2 strategies and three level 0 strategies is distinct from one in which six level 1 strategies are used, even though the mean score for the two sessions is the same. The strategies at levels 0, 1, and 2 are each qualitatively different. It is important also to keep in mind that the developmental aspect of the scale is ordinal, not interval. We do not know if the difference between a level 0 and level 1 strategy is equivalent in some psychologically meaningful way to the difference between a level 1 and a level 2 strategy.

In looking separately at strategy patterns within session used at each level across time, it is important to distinguish between the absolute number of strategies at a specified level and the percentage of strategies at a specified level. For instance, knowing that five level 2 strategies are used in one session and ten are used in another takes on a different meaning depending on the total number of strategies in the session; we need to know their percentage out of this total. Conversely, providing information on the percentage distribution within sessions without some sense of the absolute distribution can also be misleading. Fifty percent usage of level 2 strategies in a session where the absolute number of strategies is four has a different implication than fifty per cent usage of level 2 strategies where the total number of strategies is twenty. Therefore both analyses are presented in the results section.

RESULTS

Using the summary of negotiation strategies within each individual session as the basic unit of analysis, findings will be presented in the following order. First, data compiled and summarized across all sessions will be comparatively presented for each boy, in order to look at individual differences in strategy use. Then, patterns in the usage of negotiation strategies coded at each level and orientation will be examined temporally for each boy. In this latter analysis, shifts in level and in orientation across time will be examined separately, thereafter looking at the interaction between use of level and orientation across time. These findings are used to examine developmental trends in strategy use.

Overall distribution pattern of strategies for each child

Table 2 summarizes the distribution of all observed negotiation strategies used by each boy, at each level and in each orientation, summed across all thirty-five weekly observations. This table provides an overview of how each child compares to the other in overall strategy usage. It demonstrates that the modal level for both boys is level 1, followed for both in frequency by level 2, 0, and 3. Neither child makes great use of strategies classified at level 3.

Insert Table 2 about here

Although the quantitative distribution of strategies across levels is similar for each child, this is clearly not the case for the distribution of strategies by orientation. Almost all of Karl's strategies are classified in the Other-transforming orientation. Peter, on the other hand, presents a more complex picture. Although predominantly using Self-transforming strategies in this context (only 63 of his total of 252 recorded strategies are Other-transforming), the distribution of Peter's strategies by orientation appears to be related to the level of strategy he uses. While only 20% of his level 1 strategies are

Other-transforming, 29% of his strategies coded at level 0 are in this orientation, and 38% of his level 2 strategies are so categorized.

Patterns of strategy use across time by absolute number and level

Obscured by the summary statistics in Table 2 are the usage patterns of strategies at each level and orientation over the course of treatment. Figure 3 describes the absolute number of strategies coded at each session for each of the two boys. (We have separated the last ten sessions of year one from the twenty-five sessions of year two but included them on the same graph.) This graph illustrates a high correlation ($r = .88$) between the number of strategies each boy uses at each session, with Karl generally using slightly more strategies per session than Peter. The figure suggests that the pattern in absolute strategy use over the thirty-five week time period is one of low amounts of negotiation at the end of year one, beginning of year two, and end of year two, with greater negotiation interaction in the middle of year two. Breaking down the nature of these negotiations by level, the fewer negotiations at the ten sessions at the end of year one and the five beginning sessions of year two were predominantly at level 1 (70%), whereas at the five end sessions of year two there was a greater number of level 2/3 strategies (level 0 = 04%, level 1 = 59%, level 2/3 = 37%).

Insert Figure 3 about here

Descriptive summaries of each boy's use of strategies at different levels over the thirty-five week time period, averaging the strategies observed over five-week segments, present signs of distinct trends for each boy. These summaries appear in Tables 3a and 3b. Focusing on the shifts in percentage distribution of each level over the seven five-week segments, Table 3a suggests that there is a steady increase in the percentage of strategies coded at levels 2 and 3 for Karl up until the second-to-last five-week segment in year two, at which time there is a sharp decline, which is in turn followed by a rebound during the final five-week segment. Across

the same final 2-segment period, Karl's level 0 strategies increase somewhat. For Peter, Table 3b suggests a different pattern. The clearest trend in the data is the steady percentage rise in level 2 and 3 strategies across the two year period. This is accompanied by a relative decline in the percentage of strategies at level 1, beginning during the second five-week segment of the second year, and continuing through until the termination of therapy. Also, for Peter level 0 strategies remain relatively low in frequency for the last four of the five-week segments.

Insert Tables 3a and 3b about here

Changes over time in patterns of usage for each orientation

As Table 2 makes clear, Karl's pattern of usage with respect to orientation is unequivocal; he used almost exclusively Other-transforming strategies across all the phases of the Pairs treatment. However, for Peter the absolute distribution pattern with respect to orientation is varied, suggesting there may be some shifts in patterns across time. Table 4 provides a picture of the percentage distribution of Peter's Self- and Other-transforming strategies across 5-session segments. Although Self-tranforming strategies clearly dominate Peter's repertoire throughout, there is a gradual increase in percentage of strategies that are Other-transforming during the second year until the last five-session segment, even as the absolute number of strategies per session begins to decline toward the termination of the treatment.

Insert Table 4 about here

Although this table suggests that Peter has moved to a more balanced repertoire of strategies with respect to orientation, the question still remains whether over time the shift in orientation is more closely associated with the usage of strategies at one or more particular levels. Comparing the distribution of Self- and Other-transforming strategies at each level (0, 1, and 2/3) for the first eighteen ob-

served sessions as compared to the last seventeen observations, the only trend toward a shift in orientation usage over time occurs in strategies coded as level 0. The ratio of Self- and Other-transforming strategies at this level was 9:1 for the first half of the observations, but 5:5 for the second half ($Z = 1.67$, $P < .10$). Relative distributions for the other levels show no significant shifts with time.

Discussion

The discussion of results is designed to address both particular findings relevant to the observation of this specific Pair treatment procedure, and more general implications of the model for developmental methods and theory as initiated in the introduction. With respect to specific implications of the data, of initial interest is the inverted U-shaped curve describing the absolute number of strategies observed at all levels across the thirty-five sessions. Although the number of strategies in a session tells us little about the quality of the session, this pattern may reflect some relation between initiation and termination effects and the absolute amount of interaction between the pair.

At first glance we note the similarity in amount of interaction among that at the end of year one, the beginning of year two, and the end of year two. We may suspect that what is indicated at termination in year two is a regression to relative isolation of the children from one another. However, a more differentiated look at the distribution of strategies across levels, as well as their absolute quantity, presents a clearer picture. At the end of year one and beginning of year two almost all negotiations were at level 1. At the end of year two there was a greater distribution across levels. This suggests that the frequency of strategies may reflect different interaction patterns at different times, as indicated by the distribution of strategies at each level. A low number of strategies may be due to children functioning in relative isolation from one another (as at the end of year one and beginning of two). Alternatively, it may indicate a high level of

interaction in play behavior which does not entail the need for multiple negotiations, and/or, as we will discuss, it may reflect the greater use of higher level strategies which take more time for negotiation (as at the end of year two).

Likewise, the differentiated picture of variable level use at the end of year two may characterize the turmoil of termination, with its greater oscillation between progression and regression as so often reported in the clinical literature. This variability may result from felt ambivalence: both in the sense of growing capability, and in the pull toward regression reflecting the concern for leaving a familiar situation. These results point to the importance of making qualitative distinctions a part of observation tools for the evaluation of psychological intervention. While the absolute number of negotiations may be similar at the beginning and ending phases of treatment, the different levels of negotiation in these two time periods suggest different natures of interaction.

Examining individually each child's negotiation strategies across time, we find that the variability and turmoil at termination is most salient for Karl. In the middle of the second year Karl's level 2/3 strategies decreased coincidental to his being informed that Pairs would terminate at year's end because he was returning to public school. Karl's overall behavior in Pairs, as well as his production of level 2/3 strategies, improved markedly when he found out, several weeks later, that Peter also was to return to public school. Although the correspondence between these external events and Karl's strategic patterns may be scientifically insufficient to support the hypothesis that "misery loves company", it does suggest ways in which the model can be used as a barometer of the effect of external factors on social interaction.

Peter's gradual increased percentage usage of level 2/3 strategies across the period of the second year may be testimony to the value of the treatment for this child, or it may reflect independent developmental processes. However, Peter's

shift in orientation, particularly in strategies coded as level 0, points to the complex issues involved in considering social growth and maturity using developmental variables. Essentially these data reflect Peter's ability to be more aggressive, although still somewhat physically impulsive, in reaction to Karl's constant "Other-transforming" approach. Although "low level" developmentally speaking, the increase in Other-transforming level 0 strategies was nevertheless considered a positive sign by the therapeutic members of this combined research-intervention project for this child who was usually Self-transforming, particularly at the beginning of treatment. Trying out aggressive (Other-transforming) strategies at a low level may well prepare him for assertiveness, or involvement, at higher levels. These data suggest that there may be important adaptive functions served by lower level strategies, and that important contextual factors are involved in a general model of social adaptation. This should temper our enthusiasm for seeing only higher levels as "better" or "more adaptive" in all situations. In fact it may be that the capacity for increasing one's repertoire of strategies across orientations at one level is necessary for more facile utilizations of strategies at the next, given that higher level strategies reflect a greater balance of orientation.

The empirical findings from applying this model to observations of disturbed children showed that the predominant level at which strategies were classified is level 1 (or unilateral). We can think of several explanations for this finding, which are not mutually exclusive. First, indeed, these data may reflect the validity of characterizing the predominant mode by which each child deals with the other as giving and taking orders or commands (level 1). However, it is also possible that

the treatment context most readily elicits strategies at this level, whereas the children interact in other ways outside the Pairs context. These findings cannot be generalized beyond the confines of the pair itself, but must be explored in other contexts. A third factor accounting for the findings may reside in our observational procedure, rather than only in the child's repetoire of strategies or in the context which elicits them. The coding system may be most sensitive to one-way (level 1) strategies, picking up these strategies more than others in the same way that the human visual system picks up light waves only from a certain zone of a spectrum.

A final explanation for the relatively greater amount of level 1 strategies reflects on the broader issue of the qualitative nature of strategies at different levels. Earlier it was noted that the different levels assigned to negotiation strategies were considered ordinal in nature. We do not know the relative effort, difficulty, or skill level necessary for using strategies coded at one level rather than another. When we look at the few level 3 (collaborative) strategies that were used, we find that each one takes place in a long, emotionally intense interactive context. Thus these strategies are likely to be more rare both because of the emotional nature of the contexts which draw them, and because of the length of time involved in negotiations coded at this level.

Methodologically this translates into a problem of weighting. The qualitative impact of level 3 strategies most likely is greater than a quantitative analysis would indicate. Further, strategies scored at level 3 often required up to a page or more of transcript/narrative interaction. This is quite different from the "one liners" (orders, impulsive grabbing, etc.) that are classified at levels 1 or 0. How one integrates such qualitative felt differences in quantitative procedures remains a question for further study.

Troubled Children's Strategies

The general developmental model presented in this paper also has implications for issues of social development and clinical intervention with pairs of children. Regarding intervention, the model allows us to classify behavior and thus identify the child's current range of possibilities and limitations, and to identify clear and specific goals for growth. For example, how flexible is the child's use of both orientations?; what is the highest level of behavior s/he exhibits?; under what conditions does the child employ strategies of a particular orientation or level?; what types of strategies should be worked into the child's repetoire? The model helps the therapist to set incremental goals for treatment that promote growth yet are within the child's possibility. It defines for the therapist his or her role as mediator and facilitator in encouraging the children to examine the nature of their interaction strategies, and the nature of alternative and more adequate strategies.

Furthermore, the levels-by-orientation model may be used to identify and match children into pairs. It is suggested that one mechanism for movement to effective use of higher level strategies rests in the individual's exercising and experiencing strategies from the non-dominant as well as dominant orientation at his or her presently highest level. We found that both boys started out with marked consistency (rigidity) in one orientation; Peter showed some movement over the course of treatment to use of relatively more Other-transforming strategies, and many of our other cases have demonstrated such movement. This suggests that it is therapeutically sound practice to match children in pairs who use predominatly opposite orientations. In the safety of a therapeutic context, the child can come to see that strategies of the opposite orientation may not harm the Self or Other. However, we have found that matching two "Other-transformers" can generate too much conflict for therapeutic work to

even commence, and matching two "Self-transformers" can create a vacuum of no interaction, drawing the therapist in to more activity than is productive for the pair's growth.

Along this issue of orientations, the model also helps the therapist to avoid the temptation of always "blaming" the more aggressive (Other-transforming) child for unbalanced, low level interactions. Neither Other- nor Self-transforming strategies are more adaptive per se, and both types of strategies can maintain the imbalance of low-level interactions. This focuses the goal for both children on using strategies of more balanced orientation and higher level.

Finally, the model tells us about the types of change that may be pursued in Pair Therapy, and suggests aspects of the individual's functioning that require attention. The model defines interpersonal negotation strategies by their component parts: how Self and Other are conceptually viewed, how affect is controlled, what the primary purpose is, and what action-orientation is used. Thus, a form of intervention which seeks to address the child's use of strategies focuses on more than overt behaviors alone, such as learning to ask politely; it directly addresses underlying cognitive, affective, and motivational processes. Intervention which is intended to facilitate the child's flexible and effective use of strategies, in order to improve social relations, must attend to each of these component processes.

In regards to issues in the study of social development, several points should be made explicit in describing the working nature of this model in this study. First, the negotiation levels-by-orientations model is derived from the observation of behavior in real-life contexts. These observations suggest it is not necessarily expected, or even predicted, that a given individual will interact and negotiate consistently across all relationships or contexts at one level, nor is it expected that an individual will always function in or use strategies

of only one interpersonal orientation. The two interpersonal orientations and four interpersonal neogitation levels are essentially cartographic descriptions of negotiation behaviors in the context of a dyad or group. Relational context is a factor in the level and orientation of strategy used; while individuals may have a disposition to function within a particular orientation and/or at a particular level, only an interactive context can allow assessment of the actual levels and orientations used. Thus, for example, we are not surprised when the level 1 "scape-goat" (Self-transforming) becomes the level 1 "bully" (Other-transforming) in the presence of a new Other whose interactions are "more accommodative".

Second, it must be stressed that low-level strategies are not by definition immature or pathological. For young children they are expected. The descriptions of strategies at lower developmental levels are not intended pejoratively. Although these strategies include grabbing, submissiveness, and orders, all of which may connote undesirable behavior from the adult's standpoint, it is important to remember that they reflect structures which are part of normal development and are therefore age-appropriate for young children. Furthermore, and importantly, low-level strategies may be appropriate in certain contexts of negotiation (Selman et. al., in press).

Third, a word should be said about the relationship between the orientation of a strategy (Self- or Other-transforming) and its developmental level (0-3). It is necessary to stress that in our view any strategy, regardless of its orientation or its developmental level, represents an attempt to exercise some kind of control over a situation. A Self-transforming strategy is a particular way of controlling a situation in which the medium through which control is achieved is Self adaptation, and conversely, for Other-transforming strategies

control is achieved by changing Other. The emphasis on control, however, is not limited to one developmental level; control is at the heart of all negotiation strategies. However, whereas the way that control is asserted varies between orientations, the nature of the control that is sought differs as a function of developmental level. At level 1, for example, control means only asserting one's power or lack of it relative to the Other; at level 2, this assertion includes controlling the acknowledgement and/or expression of thoughts and feelings. By level 3, however, the Self- and Other-transforming orientation begin to merge, such that the issue of control rests not only in goal satisfaction but also in the ways that the satisfaction for Self and Other is portrayed. Thus, while the need for control never dissipates, the meaning and form of the control in question differs with developmental level.

Perhaps one of the most useful contributions of the proposed model (and method) is the conceptualization (and operationalization) of an integrated assessment of both developmental levels and personality or action orientations. This model suggests that growth in the area of social competence, either for young children growing older or for socially immature children becoming more interpersonally competent, is not simply movement from low to high levels, nor from either of two developmentally unrelated extremes to some "middle of the road" norm, but rather a simultaneously "upward" and "inward" balanced movement. Growth in this way reflects change in action (or personality) orientation with developmental change in the way Self and Other's perspectives are construed, the primary purpose of one's socially oriented behavior, and the means by which the Self's affective disequilibrium in an interpersonal situation is dealt with. Normal development may be characterized by the ability to move between orientations at each level until a greater integration is achieved at the higher levels; or it may be a path from lower to higher levels, staying predominantly with one

relatively fixed orientation. Low levels may be characterized by too-rigid adherence to one or the other orientation, or too-labile movement from one pole to the other. Both normative and psychopathology research in developmental perspective can help provide a clearer picture of the various roads toward social and emotional maturity.

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TABLE 1

Prototypical Interpersonal Strategies Coded at Developmental Levels 0-3 in Each Orientation

LEVEL 3

Anticipates and integrates possible reactions of Others to Self's suggestions
Balances focus on relations with focus on Self's concrete goal
Negotiates with a view to relational consistency over time

LEVEL 2

Other-Transforming Orientation	Self-Transforming Orientation
Uses friendly persuasion	Asserts Self's wants but makes these secondary to Other's wants
Seeks allies for support of Self's ideas	Follows but offers input into Other's lead
Goal-seeking through impressing Others with Self's talents, knowledge, etc.	Confronts marked inequality

LEVEL 1

Other-Transforming Orientation	Self-Transforming Orientation
Orders Other to do what Self wants	Makes weak and tentative initiatives; readily gives into Other
Makes threats of force	Acts victimized
Employs one-way "fairness"	Appeals to source of perceived power from a position of helplessness

LEVEL 0

Other-Transforming Orientation	Self-Transforming Orientation
Verbally drowns out Other's expressed wishes	Takes impulsive flight
Grabs impulsively	Uses automatic affective withdrawal
Forcefully, physically repells Other	Responds with robot-like obedience

TABLE 2

Absolute Number and Percentage of Strategies at Each Interpersonal Negotiation Strategy (I.N.S.) Level and for Each Orientation, for Each Boy and in Total.

I.N.S. Level	Peter Orientation			Karl Orientation			Both Boys
	Other-Transforming	/Self-Transforming	/Total	Other-Transforming	/Self-Transforming	/Total	
0	(6).29	(15).71	(21)	(15)100	(0).00	(15)	(36)
1	(33).20	(133).80	(166)	(231).99	(2).01	(233)	(399)
2	(24).38	(39).62	(63)	(87).97	(2).03	(89)	(152)
3		(2)	(2)		(3)	(3)	(5)
			(252)			(340)	(592)

TABLE 3

Mean Number and Percentage Interpersonal Negotiation Strategies at Each Level for Consecutive Five-Session Segments for Karl and for Peter

3a - Karl

Mean Number per Session	SESSIONS 1979 - 1980		1980 - 1981				
	16-20	21-25	1-5	6-10	11-15	16-20	21-25
Level 0	0	.6	.6	.6	0	.8	.4
Level 1	2.0	3.6	6.8	8.2	12.8	8.8	5.4
Level 2/3	0	1.4	2.6	5.2	4.8	1.8	2.8
Mean % of Total per Session							
Level 0	0	10	7	5	0	8	13
Level 1	100	69	67	59	69	77	51
Level 2/3	0	21	26	36	31	15	36

3b - Peter

Mean Number per Session	SESSIONS 1979 - 1980		1980-1981				
	16-20	21-25	1-5	6-10	11-15	16-20	21-25
Level 0	0	.2	1.6	1.0	1.2	.40	.20
Level 1	1.6	2.4	2.8	8.2	10.4	5.2	2.6
Level 2/3	0	.4	1.0	2.6	2.8	2.6	2.1
Mean % of Total per Session							
Level 0	0	5	30	5	7	5	4
Level 1	100	85	51	77	63	64	50
Level 2/3	0	10	19	18	30	31	46

TABLE 4

Total Number and Percentage Interpersonal Negotiation Strategies at each orientation for consecutive five-session segments for Peter.

SESSIONS

Orientation	1979-1980		1980-1981				
	16-20	21-25	1-5	6-10	11-15	16-20	21-25
Absolute Number							
Self-Trans.	6	14	18	43	55	39	17
Other-Trans.	2	1	6	15	22	12	8
Percentage							
Self-Trans.	75	93	80	75	70	67	73
Other-Trans.	25	7	20	25	30	33	27

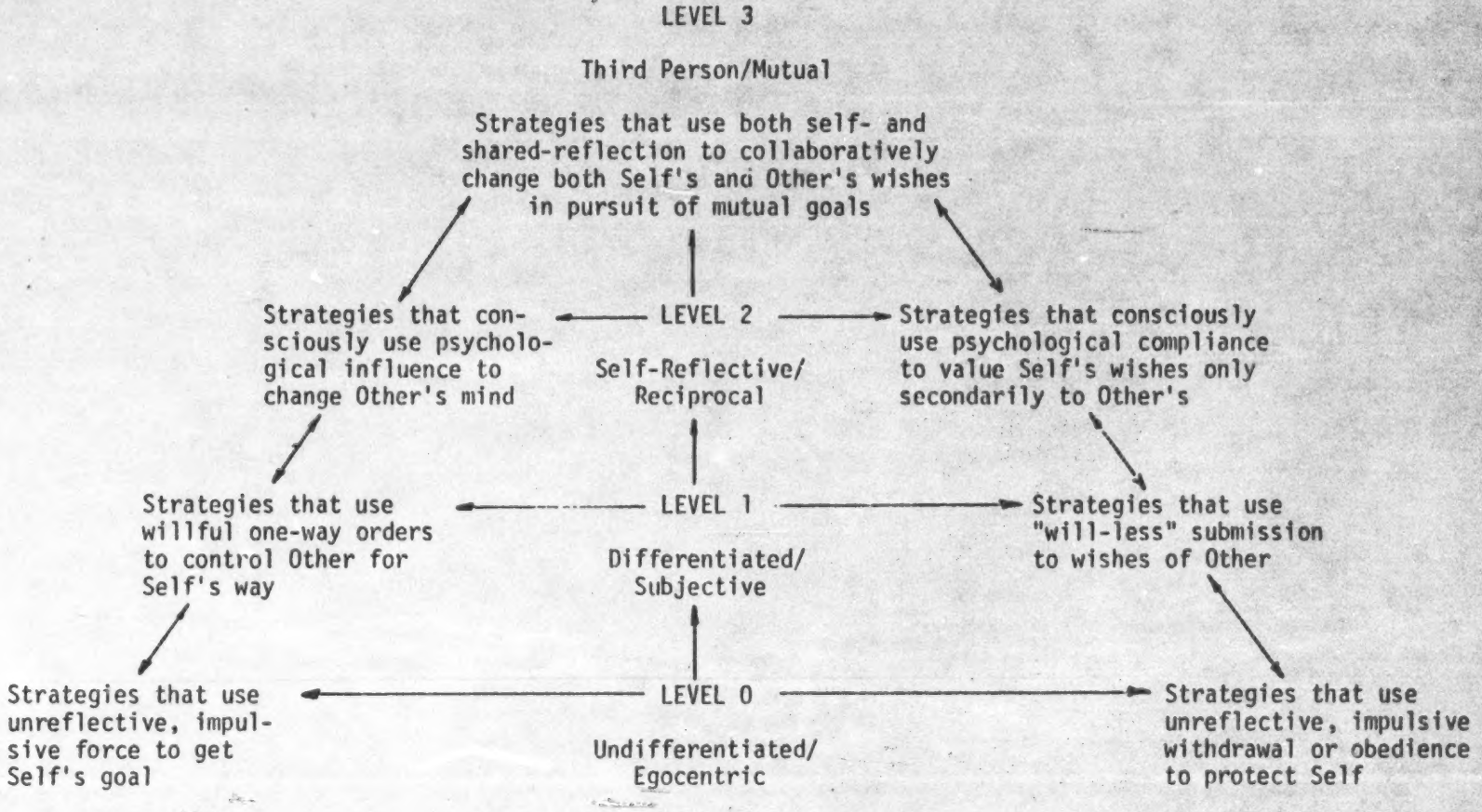
Figure List:

Figure 1: A Four Levels-by-two Orientations Model for Classifying Interpersonal Negotiation Strategies (Performance), and its Relation to the Ontogenesis of the capacity to Coordinate Social Perspectives (Competence).

Figure 2: Data Summary Sheet for a Pairs Therapy Session, Session 3, Year 2. October 27, 1980.

Figure 3: Number of Interpersonal Negotiation Strategies per Session for Karl and Peter across 35 hour-long Sessions.

Figure 1

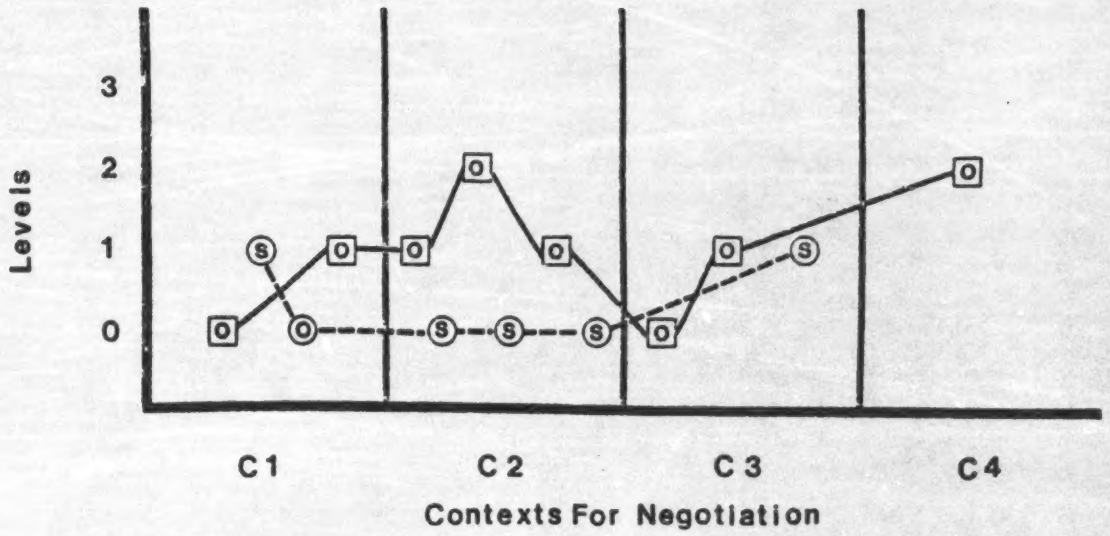

LEVEL 3
Third Person/Mutual
Strategies that use both self- and shared-reflection to collaboratively change both Self's and Other's wishes in pursuit of mutual goals
Strategies that consciously use psychological influence to change Other's mind
LEVEL 2
Self-Reflective/ Reciprocal
Strategies that consciously use psychological compliance to value Self's wishes only secondarily to Other's
Strategies that use willful one-way orders to control Other for Self's way
LEVEL 1
Differentiated/ Subjective
Strategies that use "will-less" submission to wishes of Other
Strategies that use unreflective, impulsive force to get Self's goal
LEVEL 0
Undifferentiated/ Egocentric
Strategies that use unreflective, impulsive withdrawal or obedience to protect Self

Orthogenetic Classification of Interpersonal Negotiation Strategies in the Other-Transforming Orientation

Ontogenetic Levels in Social Perspective Coordination Competence

Orthogenetic Classification of Interpersonal Negotiation Strategies in the Self-Transforming Orientation

Figure 2



□ - Karl

○ - Peter

s - Self-transforming Orientation (S.T.)

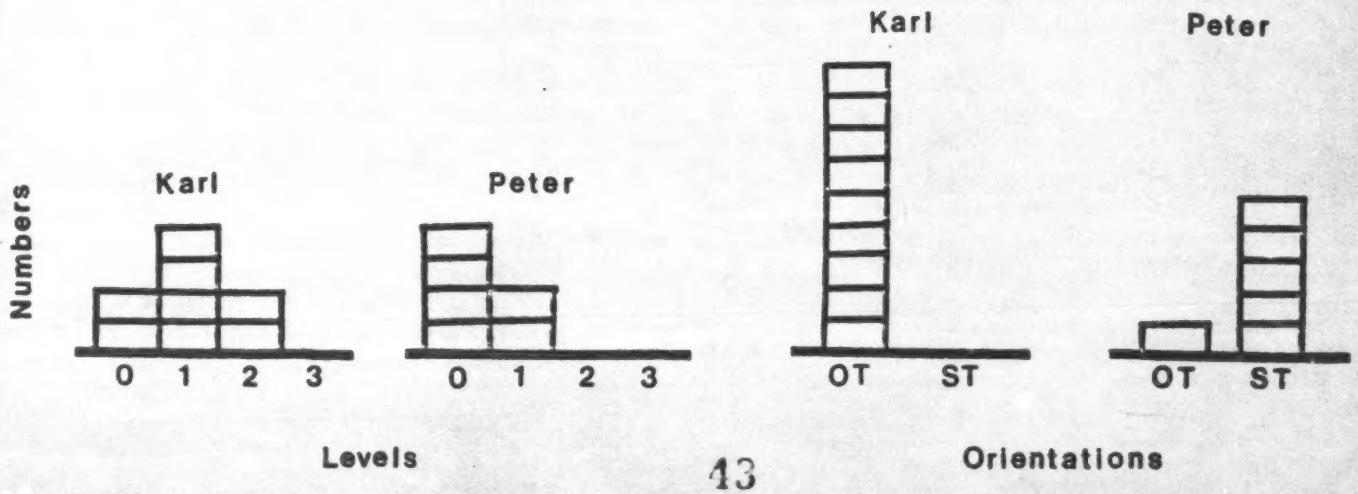
o - Other-transforming Orientation (O.T.)

C1 - Use of Typewriter (Material Allocation)

C2 - Going out vs. Staying in (Activity Choice)

C3 - Use of Airplane (Material Allocation)

C4 - Going out vs. Staying in (Activity Choice)



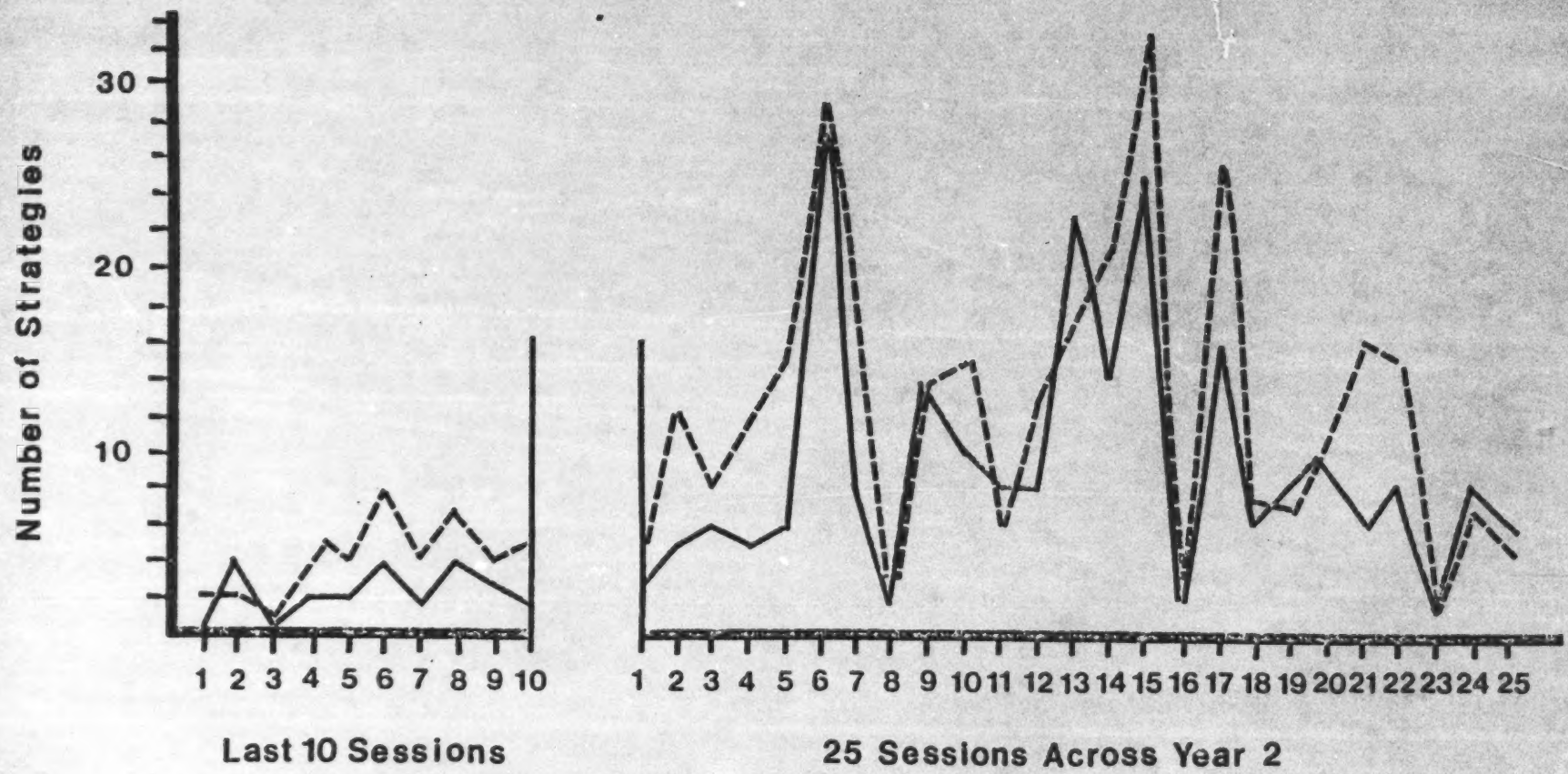

Number of Strategies
30
20
10
1 2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
Last 10 Sessions
of Year 1
25 Sessions Across Year 2
Peter
Karl

Figure 3